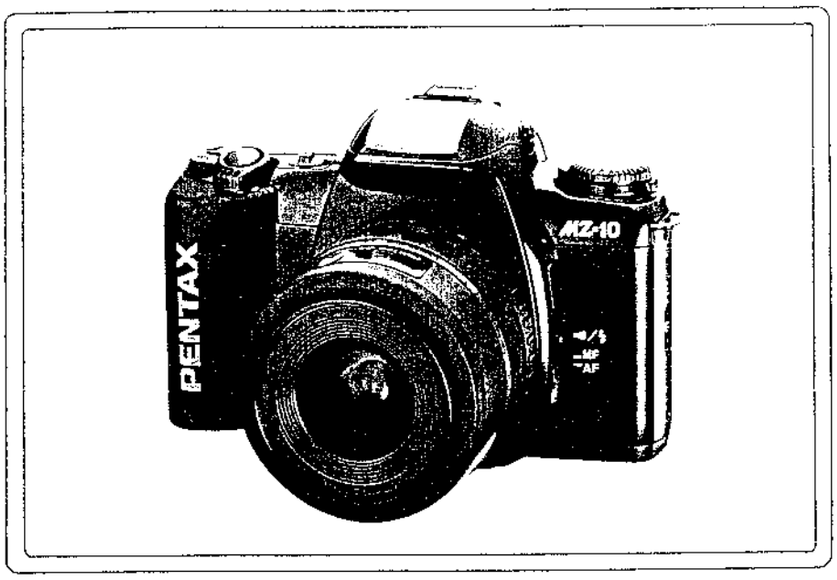
PENTAX®

Service Manual

ENGLISH

MZ-10 QUARTZ DATE



PRODUCT No. 27260 MZ-10 QUARTZ DATE

PRODUCT No. 27264 ZX-10

PRODUCT No. 27266 MZ-10

PRODUCT No. 27268 ZX-10 QUARTZ DATE

REFERING MANUAL INCLUDED

LOCATION QUANTITY DELIVERY#

NOLOC 1 80663840 000030

88500.1000
CAMERA SERVICE MANUAL

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Service Engineering Section.

10.96 H.Y.

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[SPECIFICATIONS]

Type — TTL autofocus, auto-exposure 35mm SLR with built-in TTL auto flash (RTF)

Format — 24x36mm (approx. 13x36 in panorama format)

Usable Film — 35mm perforated cartridge film. DX-coded film with ISO 25-5000; ISO 6-6400 when manually set

Exposure Modes — Smart Picture Mode, Picture Mode (Green Operation Mode, Portrait Program Mode, Landscape Program Mode, Close-up Program Mode, Action Program Mode), Shutter-Priority AE Mode, Aperture-Priority AE Mode, Metered Manual Mode, Bulb Mode, TTL Flash Mode

Shutter — Electronically controlled vertical-run focal-plane shutter, Electromagnetic release,Speed range:(1)Auto 1/2000-30 sec.(stepless),(2)Manual 1/2000-30 sec.(3)Bulb, Shutter lock by setting Main switch in OFF position.

Lens Mount — Pentax KAF3 bayonet mount (K-mount with AF coupler, lens information contacts and power contacts)

Compatible Lens — Pentax KAF3, KAF2, KA, and K-mount lenses are usable. Autofocus is possible using AF Adapter with KA-mount lenses.

Autofocus System — TTL phase-matching multi(3-point) autofocus system, AF operational brightness range; EV-1 to 19(at ISO 100 with f/1.4 lens), Focus lock available using shutter release button, Focus Mode: AF (predictive AF provided), Manual [MF]

Power Zoom — 3-Speed Intelligent Power Zoom lens with built-in motor with FA zoom lens

Viewfinder — Pentamirror finder, Natural-Bright-Matte focusing screen, Field of view:92%, Magnification:0.77X(with 50mm lens at ∞), Diopter: -1 diopter, Panorama format frame

Viewfinder Indication — Focus Information: In-focus (Green lamp [○] is lit), front or back focus signals and unable-to-focus indicator (Green lamp blinks), Shutter speed indication, Aperture indication, Flash ready indication [ϟ] is lit, Bar graph(exposure compensation),Over or Under exposure indication in Metered Manual Mode, [▨] exposure compensation indication, Green Operation Mode [ ], Portrait Program Mode [ ], Landscape Program Mode [ ], Close-up Program Mode [ ], Action Program Mode [ ]

External LCD panel Indication — [M] = Metered Manual Mode, [ ] = Green Operation Mode, [ ] = Portrait Program Mode, [ ] = Landscape Program Mode, [ ] = Close-up Program Mode, [ ] = Action Program Mode, Shutter speed indication, Aperture indication, [ϟ] = Built-in flash ready indication, [ϟ] = blinking slowly flash recommended warning, [ϟ] = blinks rapidly inappropriate lens warning, [ ] = Red-eye reduction flash mode, [A] = Automatic flash function, ISO indication, [____] = Film status information, [ ] = Battery exhaustion warning, Exposure counter, [ ] = PCV signal indication, [ ] = Exposure compensation, Exposure compensation value

Self-timer — Electronically-controlled type with delay time of 12 sec. Start by depressing of shutter release button, Operation confirmation: By PCV beep tone. Cancelable after operation

Mirror — Instant-return mirror with AF secondary mirror

Film Loading — Film advances automatically to 1st frame after back cover is closed. Film information window is provided

Film Wind & Rewind — Auto wind/rewind by built-in motor, Consecutive or Single advance mode, Approx.2 frames/sec.(consecutive mode), Auto rewinding starts at end of roll, Film rewind/completion of rewinding is displayed on the LCD panel, Mid-roll rewind button will rewind film in mid-roll

Exposure Meter — TTL multi(6)-segment metering, Metering range from EV0 to EV21 at ISO100 with 50mm f/1.4 lens

Exposure Compensation: ± 3EV in 0.5EV step increments

Flash — Series-control, Retractable TTL Auto Flash (RTF), Guide number:11 (ISO100/m), Illumination angle covers 28mm lens angle of view, Flash-sync-speed in the range from 1/100 sec. to a slower speed, Day-light-sync flash, Slow-speed-sync flash, Contrast-control flash (ISO range = 25 - 400), Automatic flash function, Red-eye reduction flash function

Flash sync — Hot shoe with X-contact with couples with Pentax dedicated auto flashes, ISO range = 25-800

Power Source — Two 3V lithium batteries (CR2 or equivalent)

Battery Exhaustion Warning — Battery exhaustion symbol [ ] is lit (blinking when the shutter is locked; no indication on the right-hand edge of the viewfinder.)

Dimension and Weight -135.0mm(W)x90.5mm(H)x62.5mm(D) (5.3"x3.6"x2.5") 350g(12.3 oz) body only without batteries

Date Model

Date mechanism — Crystal quartz controlled LCD with digital clock, auto calendar up to 2019. Possible to print both standard and panorama format picture. 7-segment, 6-digit liquid crystal digital display

Imprinting mode — year/month/day, day/month/year, month/day/year, day/hour/minute, and "------" (blank)

Power source — 3V lithium battery (CR 2025 or equivalent)

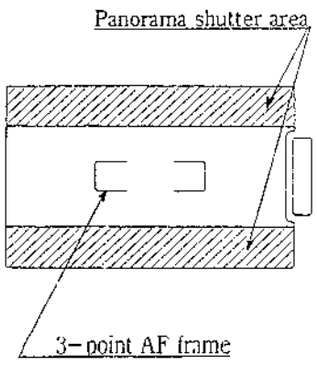
Number of prints — Approx. 5000

Dimention and Weight -135.00mm(W)x90.5mm(H)x62.5mm(D) (5.3"x3.6"x25")365g(12.9oz)body only with out batteries.

Supplied Accessories — Hot Shoe Cover Fc, Release Socket Cap F, Camera Strap Fa, Eye Cup Fa, Finder Cap

[LCD AND FINDER INDICATIONS]

■ Finder indications



Finder LCD

■ LCD panel indications

Outline:

Disassembly and assembly procedures for MZ-10 are almost the same as MZ-5 (Prod. No. 27250). The differences for service works from MZ-5 are Top cover, Front cover, Mount ring, their related parts and soldering around LCD panel.

The only exclusive service works and adjustments for MZ-10 are mentioned below.

For others, refer to the service manual for MZ-5.

1. External parts

【 Disassembly procedure 】

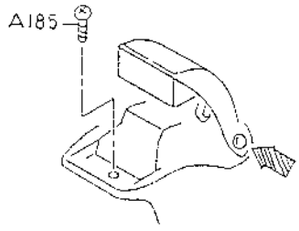
Bottom cover (A401) ··· 7 screws (A181,A187 x6), 0-A402 (Battery cover assy.)

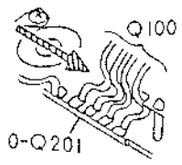
Back cover (A201)

8 retainer screws for Top cover

Set the flash pop-up condition, then remove the screw (A185).

【 Note of assembly 】 Arrange the lead wires from Q100.

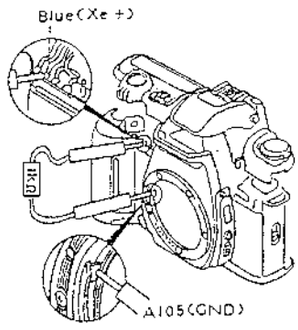




Discharge of electricity of the main capacitor

Lift the top cover from the body, and then discharge electricity of the main capacitor with a 100-1 k ohm resistor.

- Land of the blue wire (Xe+) on the flash P.C. board
- A105 (Mount spring) ··· GND



Front cover (A102)

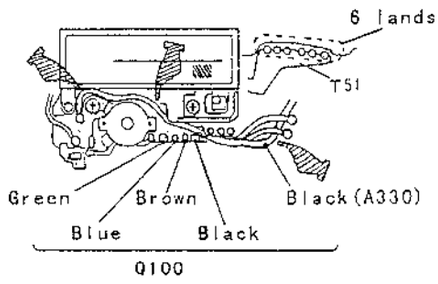
【 Note of assembly 】 Set both the body and Focus mode switch with the AF-position.

Grip (A150)

Unsoldering from Top cover

5 lead wires, 6 lands (0-T100+T51)

【 Note of assembly 】 Arrange the black lead wires (A330).



Top cover assy. (0-A301)

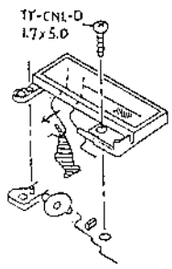
2. Main unit and soldering

【 Disassembly procedure 】

☆ Turn the panorama lever to normal frame.

Removing LCD panel

TY-CNL-D1.7X5.0

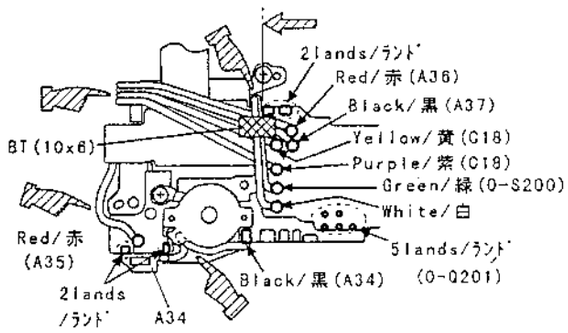


Around Release SW

8 lead wires, 9 lands

【 Note of assembly 】

Arrange the lead wires as shown in the diagram right.



Mode SW land part

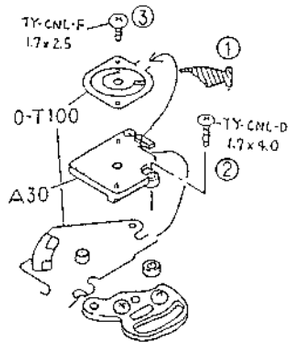
TY-CNL-F1.7x2.5

Lift up the land part.

TY-CNL-D1.7x4.0, A30 (Mode SW base plate)

【 Note of assembly 】

Install the mode SW land part in numerical order of diagram right.



Unsoldering

2 lead wires(red, black −N300)

Lands: T81, T301, T61 (Shutter block−, Mount−, Date−flexible P.C.board)

T64(Back cover key SW P.C.board), R110 (DX contact piece assy.)

【 Note of assembly 】 After soldering, put the middle part of T81 into the body.

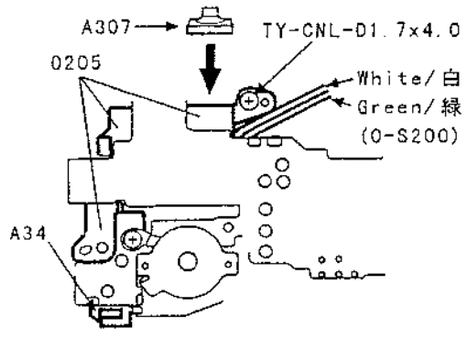
Battery contact piece (−)

A34

Release SW base plate (O205)

TY-CNL-D1.7X4.0, lift up O205.

Exposure compensation SW (A307)



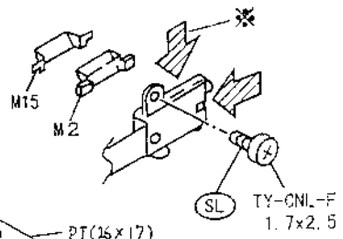
Eyepiece frame (M301)

2 screws

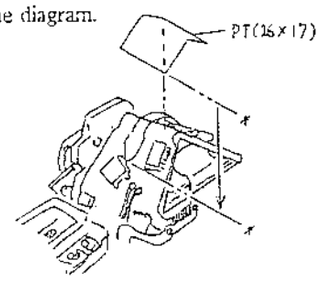
3. Main P. C. board (0-T100)

[Note of assembly]

1) Install the Finder LCD as shown in the diagram.
(※ : difference from MZ-5)



2) Install PT(26x17) as shown in the diagram.

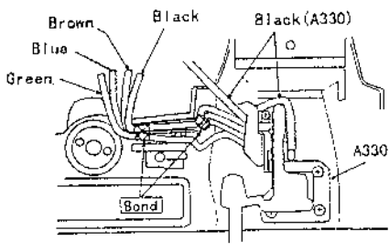


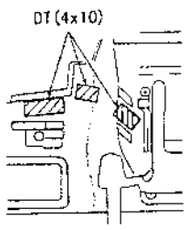
4. Top cover

[Note of assembly]

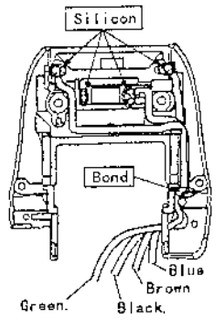
Arrange the lead wires as shown in the diagram below.

■ Top cover (A301)





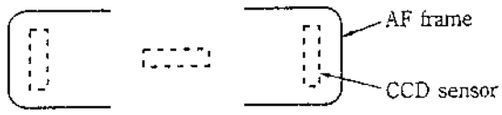
■ Flash frame (Q2)



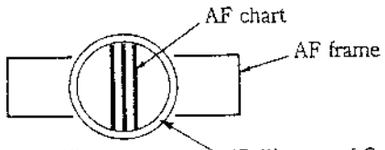
5. Adjustment and Confirmation (supplement)

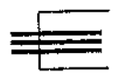
5-1. Adjustment and check with computer program

1) Positions of AF frame and CCD sensor (for reference)

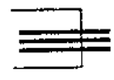


2) Match both the AF frame and AF chart as shown in diagram below.





Left (L) position

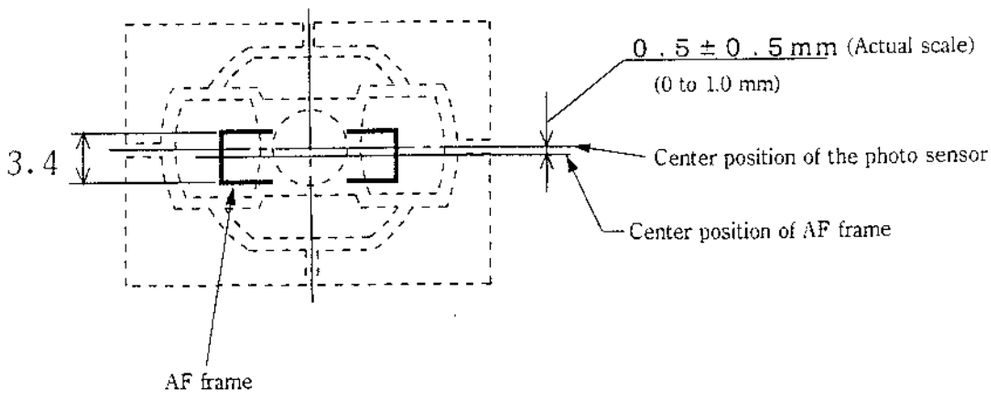


Right (R) position

5-2. Mechanical back

Standard : 45.46 mm +0.02, -0.035

5– 3. Photo sensor position



【 Reference 】 If a lens with a large aperture (ex. FA 50mm f/1.4) is mounted, the pattern of the photo– sensor will be seen easily on the 1st mirror.